

CLAIMS

1. An amplifier system (1) for satellites including:
 - first and second amplifier modules (A_1, A_2) each having an input and an output,
 - 5 - a signal divider (D) having an input, a first output, and a second output,
 - a signal combiner (C) having a first input, a second input and an output, said first output of said divider (D) being connected to said input of said first amplifier module (A_1) via a connection length Le_1 , said second output of said divider (D) being connected to said input of said second amplifier module (A_2) via a connection length Le_2 , said output of said first amplifier module (A_1) being connected to said first input of said combiner (C) via a connection length Ls_1 , said output of said second amplifier module (A_2) being connected to said second input of said combiner (C) via a connection length Ls_2 , and said connection length satisfying the equation $Le_1 + Ls_1 = Le_2 + Ls_2$, which system is characterized in that the connection length Ls_1 is different from the connection length Ls_2 .
 - 10 2. An amplifier system (1) for satellites according to claim 1 characterized in that said length Le_1 is equal to said length Ls_2 and said length Le_2 is equal to said length Ls_1 .
 - 15 3. An amplifier system (1) for satellites according to either claim 1 or claim 2 characterized in that at least one of said amplifier modules (A_1, A_2) is a traveling wave tube amplifier.
 - 20 4. An amplifier system (1) for satellites according to claim 1 characterized in that at least one of said amplifier modules is a semiconductor SSPA.
 - 25 5. An amplifier system (1) for satellites according to claim 1 characterized in that the connections between the outputs of said amplifier modules and the input of said combiner are waveguides.
 - 6. An amplifier system (1) for satellites according to claim 1 characterized in that at least one of said amplifier modules (2) includes:
 - first and second amplifier submodules (A_1, A_2) each having an input and an output,
 - 30 - a signal divider (d) having an input, a first output, and a second output, and
 - a signal combiner (c) having a first input, a second input, and an output, said first output of said divider (d) being connected to said input of said first

amplifier submodule (A₁) via a connection length Le₁₁,
said second output of said divider (d) being connected to said input of said
second amplifier submodule (A₂) via a connection length Le₁₂,
said output of said first amplifier submodule (A₂) being connected to said first
input of said combiner via a connection length Ls₁₁,
said output of said second amplifier submodule being connected to said second
input of said combiner via a connection length Ls₁₂,
said connection lengths satisfying the equation Le₁₁ + Ls₁₁ = Le₁₂ + Ls₁₂, and the
connection length Ls₁₁ being different from the connection length Ls₁₂.